

leaving without visible trace, our presence there "as fish through the water—as birds through the air."

We are very recent arrivals on the planet Earth and have occupied our Nation for just an instant in time. But, even now, we must search diligently for a trace of what was originally here. Surely the genius and energy that transformed a wilderness continent can protect and expand a few remnants. Our population projections only add urgency to our search for and protection of the bits and pieces of natural areas close to our cities and along our transportation routes. These thousands of diverse biotic communities can be the learning satellites to the great wilderness areas within our National Forests.

Aldo Leopold said: "The richest values of wilderness lie not in the days of Daniel Boone, nor even in the present, but rather in the future." We must reflect and act on his wisdom; our children will be grateful.

White Collar, Blue Collar: Job Trends

JAMES G. MADDOX

THOUSANDS of Americans switch jobs every year. Some workers stay with the same employers but change occupations. Others move from one industry to another, for example—from farming to a job in manufacturing or construction.

Many of these job changes have resulted in large numbers of people moving from the open country to small towns and cities or large urban

centers. They have also had important impacts on the scope and type of educational and training programs needed to qualify workers for new jobs, the number of people receiving public welfare assistance, and on many other aspects of society.

In order to understand past changes, and to gain insights into probable future developments, we need answers to such questions as these: In what industries, occupations, and geographic regions have jobs been increasing or decreasing? What are the major factors that have brought about these changes? To what extent are the changes of the past likely to be of significance in the future?

Knowledge about the nature and extent of future job opportunities is particularly relevant to young people who are preparing themselves to choose careers and enter the labor force in the years ahead.

One of the most important past trends has been a pronounced upward shift in the share of total employment in service-producing industries, and a downward shift in the proportion of employees in goods-producing industries.

The principal goods-producing industries are agriculture, mining, manufacturing, and construction. In 1950, employment in these four industries was 47 percent of the total of almost 60 million civilian workers in all industries. By 1968, total employment had risen to 76 million, but the share of the total in these four industries had declined to 37 percent.

In contrast, the share of employees in the five major service-producing industries—wholesale and retail trade; transportation, communications, and public utilities; personal, professional, and business services; Federal, State, and local governments; and finance, insurance, and real estate—rose from

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JAMES G. MADDOX is Professor of Economics in the School of Agriculture and Life Sciences at North Carolina State University, Raleigh.

53 to 63 percent of our total civilian employment.

There are several striking examples of this pattern of change. In 1950, almost 8 million persons—hired workers, self-employed, and unpaid family workers—had jobs in agriculture, forestry, and fisheries. They represented 13 percent of total employment.

By 1968, their number had declined to slightly less than 4 million. Thus, there had been a decrease of more than 50 percent in agricultural employment in 18 years, and the proportion of total employment that was in agriculture had declined to 5 percent.

Conversely, the number of employees in wholesale and retail trade increased from 11 million in 1950 to 16 million in 1968—a gain of 45 percent—and their share of total employment rose from 19 to 22 percent. Similarly, civilian employment in Federal, State, and local governments increased by 210 percent—from under 3 million workers in 1950 to over 8 million in 1968. Their share of total employment rose from 4 to 11 percent in this 18-year period.

What is the explanation for this shift of workers from goods-related to service-related industries? Two factors were of major importance.

- Technological improvements and the substitution of machinery for manpower have proceeded much more rapidly in farming, mining, and many types of manufacturing than they have in most of the service-producing industries. It has been both easier and more profitable to mechanize the production of commodities than the production of services.

- As personal incomes and leisure time have risen, consumers have greatly increased their demands for many types of services, such as education, medical care, and recreation. Likewise, an increasing proportion of income is being spent for repairs to automobiles, radios, television sets, and other household items; and for advertising, entertainment, and numerous types of activities.

All this has increased the demand for workers in the service-producing industries.

The changes which have resulted in an increasing share of the total work force being employed in service-related industries, together with new production processes in many goods-producing industries, have had repercussions on the distribution of employees among different occupations. The service industries have a high proportion of white collar employees, such as professional and technical workers, managers, officials and proprietors of business firms, and clerical and salesworkers.

It is not surprising, therefore, that the number of white collar workers rose from approximately 22 million in 1950 to 35 million in 1968—a gain of almost 59 percent. In contrast, the number of blue collar workers—craftsmen and foremen, operators of machines and equipment, and lower-skilled nonfarm laborers—increased from 23 million to 27 million, or only 18 percent.

As a result of these differential rates of change, the proportion of white collar employees rose from 38 to 47 percent of the total number of employees between 1950 and 1968 while the proportion of blue collar workers declined from 39 to 36 percent. The proportion of farm laborers and household servants also declined.

Within the white collar group, the most rapid rates of increase were among professional and technical workers, whose number rose from less than 5 million in 1950 to over 10 million in 1968, and among clerical workers, whose number increased from under 8 million to almost 13 million. The share of employment represented by the total of professional, technical, and clerical workers rose from 20 to 30 percent of all employees between 1950 and 1968.

The pronounced upward shift in the number and proportion of white collar workers, especially those in professional and technical occupa-

tions, not only reflects changes in the kinds of workers being demanded in our increasingly service-oriented society, but also indicates that the educational level of the workforce is rising.

Emphasis the Nation has put on education and training has qualified an increasing number of people for white collar occupations, raised the productivity and earnings of blue collar workers, and put a premium on brainpower as contrasted with musclepower in many types of jobs.

This points to the importance of a good education and adaptable skills, if young people who are entering the labor force for the first time and older workers who are shifting from one industry to another are to succeed in getting and holding good-paying jobs.

In addition to job trends among different kinds of industries and occupations, there have been important geographic shifts in employment. To a large extent, persons of working age migrate in response to changes in the location of job opportunities.

The 1968 *Manpower Report of the President* pointed out that: "There are two types of relationships between migration and economic development. First, migration acts as a key factor in an adjustment process whereby labor moves from where it is redundant to where it is needed; second, and more significant for the long run, the movement of labor attracts business to areas which are growing, because the right skills and qualities of labor are available and because purchases by the workers and their families increase market opportunities.

"In other words, areas which tend initially to attract people reinforce this attraction through the process of migration."

Largely as a result of these two types of forces, long-term job trends have been from rural to urban areas. Today, most jobs in the United States are in and around cities.

Historically, the heaviest concentrations of both industry and population were in New England, the Middle Atlantic, and the East North Central regions of the country. However, these patterns are changing.

For the past three decades, employment and population have expanded quite rapidly in the Southwest and the Pacific regions, and nonfarm employment has grown more rapidly in the South than in the older industrial areas of the North.

While these regional shifts in employment have provided large numbers of jobs outside of the older industrialized areas of the country, there has been some tendency in the 1960's for jobs to be less concentrated in large cities.

Among the important factors influencing location of industries in recent years are: local pools of trainable workers; low-cost real estate on which to locate manufacturing plants, warehouses, and parking lots for workers; ready access to new interstate highways; and availability of numerous types of public facilities and business services that are particularly important to relatively small manufacturing firms.

Consequently, there appears to be a tendency for an increasing proportion of the new plants of expanding manufacturing industries to locate in medium-sized and small cities, rather than in large, congested, urban centers. Likewise, there are numerous examples of both service-producing and manufacturing firms that have moved out of the older, congested, central areas of the large cities and located in the suburbs.

As we look toward the future, it is reasonable to believe that most of the past trends will continue. However, much depends on public policies in the years ahead. If fiscal and monetary measures succeed in keeping national unemployment rates low, an increasing proportion of the future work force is likely to be employed in service-related jobs and in those kinds of goods-producing industries

which require rising levels of education and skill on the part of workers. This will result from increasing specialization in production processes and from rising per capita incomes of consumers.

Employment in agriculture is expected to continue to decline during the decade of the 1970's. It is quite probable that the rate of increase in manufacturing jobs will not be as rapid as in trade, government, and many types of professional and business services. Thus, past directions of change in the number and proportion of employees among groups of industries and occupations are likely to continue into the future.

Some geographic dispersal of employment will also probably continue. This will flow from growing public concern over problems of congestion and pollution, and rising public and private costs associated with the heavy concentration of population in metropolitan areas. It will also result from the emergence of new industries related to improving the quality of the environment and to producing low-cost housing, and from new and faster forms of transportation.

The underlying factors which have brought about past job trends among industries, occupations, and geographic areas have raised the general level of productivity of the economy. At the same time they increased the levels of living of most workers, and enlarged the opportunities of many members of the labor force.

However, shifting job patterns have not occurred without sizable private and public costs. Because of a lack of information about job vacancies and because of inadequate education and skills, many workers in rural areas have been stranded in dead-end situations.

At the same time, large numbers of Negroes, Puerto Ricans, and a few other minority groups who have moved into overcrowded slum areas of central cities are handicapped in many respects, including accessibility

to suburban areas where jobs around urban centers have been increasing most rapidly.

Partly as a result of these factors, welfare rolls have risen, and public costs for training workers to acquire new skills have increased. Many rural areas have lost large numbers of people, thousands of businesses in hundreds of small towns have disappeared, and many local governments are hard pressed to finance their activities.

Probably the most serious economic and social conditions exist in the older sections of our large cities, where the combination of employment and housing discrimination against Negroes and other minorities have created deplorable living conditions and explosive racial situations.

Clearly, the shifts in employment patterns which result from economic growth and development do not affect all groups equally. Most of us receive significant benefits. Others suffer real costs. Public policies need to take account of both types of effects.

Rural Areas And the People- Jobs Cycle

JOHN R. FERNSTROM and
RONALD E. KAMPE

PEOPLE go where the jobs are and jobs develop where people are. The people-job phenomenon is circular in nature and once started tends to continue from its own momentum—without regard to the interest of the individual or the nation.